We claim:

1. A tunable filter, comprising:

means for selecting a range of wavelengths from at least one incident beam of light comprising a plurality of wavelengths to produce at least one beam comprising said range of wavelengths and at least one beam comprising the remaining wavelengths;

means for maintaining the propagation direction of said at least one beam comprising said range of wavelengths; and

means for maintaining the propagation direction of said at least one beam comprising the remaining wavelengths, upon any range of wavelength selection.

2. The tunable filter of claim 1, further comprising:

means for collecting said at least one beam comprising said range of wavelengths in a first output port; and

means for collecting said at least one beam comprising the remaining wavelengths in a second output port.

3. The tunable filter of claim 1, wherein said means for selecting a range of wavelengths from at least one incident beam of light comprises a bandpass filter.

4. The tunable filter of claim 1, wherein said means for selecting a range of wavelengths comprises a bandpass filter and a mirror and means for operatively positioning said bandpass filter in said at least one incident beam of light, wherein light within the bandpass of said bandpass filter will pass through said bandpass filter to produce said at least one beam comprising said range of wavelengths, wherein said means for selecting a range of wavelengths further comprises means for operatively positioning a mirror to redirect said at least one beam comprising the remaining wavelengths.

5. The tunable filter of claim 4, wherein said means for operatively positioning said bandpass filter and said means for operatively positioning a mirror comprises an optically transparent substrate, wherein said bandpass filter and said mirror are fixedly attached to said substrate.

6. The tunable filter of claim 5, wherein said optically transparent substrate comprises a plane parallel plate.

7. The tunable filter of claim 1, wherein said means for maintaining the propagation direction comprises an optically transparent substrate positioned in the path of said at least one beam comprising said range of wavelengths and in the path of said at least one beam comprising the remaining wavelengths.

8. The tunable filter of claim 6, wherein said means for maintaining the propagation direction comprises a second optically transparent substrate positioned in the path of said at least one beam comprising said range of wavelengths and in the path of said at least one beam comprising the remaining wavelengths, wherein said optically transparent substrate comprises a plane parallel plate.

9. The tunable filter of claim 8, further comprising an third optically transparent substrate positioned in said at least one beam comprising said range of wavelengths but not in the path of said at least one beam comprising the remaining wavelengths, wherein said third optically transparent substrate compensates for the thickness of said bandpass filter.

10. The tunable filter of claim 5, further comprising a corner cube positioned to reflect said at least one beam comprising the remaining wavelengths to an output port.

11. The tunable filter of claim 9, further comprising a fourth optically transparent substrate with a second mirror attached thereto fixedly attached to said plane parallel plate, wherein said fourth optically transparent substrate and said second mirror are operatively positioned to combine a second incident beam with said at least one beam comprising the remaining wavelengths.

12. The tunable filter of claim 4, further comprising a thermal compensator operatively in contact with said plane parallel plate to adjust the angle of incidence of said at least one incident beam of light on said bandpass filter as temperature changes shift the pass-band wavelength of said bandpass filter.

13. The tunable filter of claim 1, comprising a first plane parallel plate and a second plane parallel plate that together form a wedge, wherein said means for selecting a range of wavelengths comprises a reflection bandpass filter fixedly attached to said second plane parallel plate, wherein said means for maintaining the propagation direction of said at least one beam comprising said range of wavelengths comprises said first and second plane-parallel plates, wherein said means for maintaining the propagation direction of said beam comprising the remaining wavelength comprises said reflection bandpass filter attached to said second plane parallel plate and a mirror fixedly attached to said first plane parallel plate.

14. The tunable filter of claim 1, comprising a first plane parallel plate and a second plane parallel plate that together form a parallel gap, wherein said means for selecting a range of wavelengths comprises a bandpass filter fixedly attached to said second plane parallel plate, wherein said means for maintaining the propagation direction of said at least one beam comprising said range of wavelength comprises said first and second plane-parallel plates, wherein said means for maintaining the propagation direction of said beam comprising the remaining wavelengths comprises said reflection bandpass filter attached to said

second plane parallel plate and a mirror fixedly attached to said first plane parallel plate.

15. The tunable filter of claim 1, further comprising means for separating said at least one incident beam of light into two orthogonally polarized beams of light comprising a first beam and a second beam.

16. The tunable filter of claim 15, wherein said means for separating said at least one incident beam of light into two orthogonally polarized beams is selected from the group consisting of a birefringent crystal and a polarizing beamsplitter.

17. The tunable filter of claim 16, further comprising means for making the polarization of said first beam and said second beam to be parallel to each other.

18. The tunable filter of claim 17, wherein said means for making the polarization of said first beam and said second beam to be parallel to each other comprises a 90 degree rotator positioned in the path of one of the said first beam and said second beam.

19. The tunable filter of claim 18, wherein said means for selecting a range of wavelengths splits said first beam into a third beam and a fourth beam and splits said second beam into a fifth beam and a sixth beam, wherein said at least one beam comprising said range of wavelengths comprises said fourth beam and said sixth beam, wherein said at least one beam comprising the remaining wavelengths comprises said third beam and said fifth beam.

20. The tunable filter of claim 19, further comprising means for combining said third beam with said fifth beam and said fourth beam with said sixth beam.

21. The tunable filter of claim 20, wherein said means for combining comprises a 90 degree rotator for making the polarization of said third beam and said fourth beam to be parallel with the polarization of said fifth beam and said sixth beam.

22. The tunable filter of claim 21, wherein said means for combining further comprises a birefringent crystal.

23. The tunable filter of claim 21, wherein said means for combining further comprises a polarizing beamsplitter.

24. A method, comprising:

selecting a range of wavelengths from at least one incident beam of light comprising a plurality of wavelengths to produce at least one beam comprising said range of wavelengths and at least one beam comprising the remaining wavelengths;

maintaining the propagation direction of said at least one beam comprising said range of wavelengths; and

maintaining the propagation direction of said at least one beam comprising the remaining wavelengths, upon any range of wavelength selection.

25. The method of claim 24, further comprising:

collecting said at least one beam comprising said range of wavelengths in a first output port; and

collecting said at least one beam comprising the remaining wavelengths in a second output port.

26. The method of claim 24, wherein said means for selecting a range of wavelengths comprises tuning the angle of incidence of said at least one incident beam of light with respect to a bandpass filter.

27. The method of claim 24, wherein said means for selecting a range of wavelengths comprises inserting a filter into said at least one incident beam of light, wherein said filter comprises a desired wavelength pass band.

28. The method of claim 27, wherein said filter is selected from the group consisting of a bandpass filter and a reflectance filter.